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A REVIEW OF SELECTED INDO-AMERICAN
TECHNICAL ASSISTANCE PROGRAMS //

The Country of India

India, an independent republic, occupies the largest portion of the India subcontinent with a population of 400, 000, 000 people. Its area is 1, 221, 880 square miles which is divided into fourteen states and six territories. Uttar Pradesh state has the largest population with 64, 000, 000 people, and Bombay state comes next with around 34, 000, 000.

India's climate ranges from the tropical heat of Southern India to the arctic cold of the Himalayas. Nearly one quarter of the country is covered with forests, which include such exotic woods as sandalwood, teak, ironwood, deodat, satinwood, sago, banyan and acacia. Agriculture occupies about 70 percent of the people of India, and in spite of its predominantly agricultural character, Indian food deficits range from around two million to as high as seven million food tons per year. Since its inception as an independent republic in 1950, India has tried unsuccessfully to become self-sufficient in food. Agriculture was given major priority in the first five-year plan, somewhat downgraded in favor of industrial and resource development in the second five-year plan and is now a major item in the recently announced third five-year plan. Under the present five-year plan, India is continuing the expansion of lignite, iron, steel, electric power and coal, building an extensive system of hydro-irrigation dams, improving rail and water

transportation systems, and developing industrial plant capacity. This is costing around ten billion dollars, more than half of which must come from sources outside of India. The chief industries in India are textiles, steel and cement. The textile industries consist of a wide variety of cotton, wool and silk products.

India's total imports run around nine to ten billion rupees against exports of about 6.5 billion rupees. The exports include raw and processed jute, tea, cotton, hides and skins, mill work, manganese, tobacco and pepper. Industrial distribution is regulated by price control. Practically all utilities, railroads and airlines are state owned. Fifty airlines operate within the republic with one international airline. Additional manufactures include ammonium sulphate, soda ash, caustic soda, pharmaceuticals, ball bearings, sewing machines, bicycles, flour milling, transformers and sheet glass. These are but a few, cited to indicate that India, far from being a completely rural state, ranks possibly sixth or seventh as an industrial state in terms of actual industrial production.

The Government

India has one of the oldest civilizations, going back at least five thousand years and longer.

The British gained control over all India in 1785 and this continued with varying degrees of colonial rule and moves toward self-government over the centuries, culminating in the constitution of 1935 with a bicameral federal congress and a council of states. Britain withdrew from India

in August 1947 and India became a sovereign state within the British Commonwealth of Nations. This India continues to be, though her new Constitution is patterned after that of the United States. The president is elected for a five-year term and there is an electoral college. Parliament may be dissolved, as in Great Britain, though the Council of States may not be dissolved. The council membership rotates by retiring one-third of its members every second year. The Congress party, headed by Nehru elected in 1952, has held office since that date, winning a majority in nearly all states save Kerla, formerly Travancore, which went Communist in the 1958 elections.

Education and Religion

The constitution provides for free, compulsory education through age 14. There are 28 universities, 650 colleges and two new research institutes. There are 14 main languages originating in Sanskrit with hundreds of dialects and sub-languages. Hindi is the official language set for 1965 with English as the second language, though Urdu is mostly spoken by the Moslem portion of the population, now representing about 36,000,000 of the inhabitants. Hindus represent 305,000,000 and the remainder, mostly Christians, 8,200,000, and Sikhs, 6,200,000. Veda or Hindu is the main religion followed by fully 85 percent of all inhabitants.

All recruitments for the various services of India's defense system are voluntary and, based somewhat on the previous system, the

army affords a career for some sons of the top families in India. Like Pakistan, some of the best intellectual and aggressive elite are in the armed forces.

American Assistance to the Indian Development Program

The Indian program is distinct from all other programs in the African, Middle East and Southeast Asia areas in many respects.

First, India had a different bilateral agreement to start the program in 1952. The bilateral agreement provided among other things that India would have the dominating voice in the kind of aid and the extent of the aid, as well as what would be done with the assistance, technical and otherwise, which the United States has offered this country.

Second, it more or less placed the U. S. in the position of cooperating with India rather than having India cooperate with the U. S. on what we might call our program.

India has kept rigidly neutral in the so-called "cold war." This also has resulted in a different kind of a content for the program in India. There are no military expenditures chalked up in the \$3, 582, 500, 000 which the United States has put into India since 1952.

The kind of aid this adds up to is as follows:

1. \$750, 000, 000 or 32. 8 percent of the total value of agricultural commodities supplied to India under Public Law 480 or grant made to the Indian government for economic

development; \$322, 200, 000 provided under the Indo-American Technical Cooperation Program. These two outright grants total \$1, 072, 200, 000.

2. In addition, there is a series of loans totaling \$1,548,500,000 which can be paid to the Indian government either in rupees or American dollars.

These loans are as follows:

One loan made in 1951 by the Ex-Em Bank totaling \$355, 100, 000, to be repaid in dollars.

Loans made by the Development Loan Fund now totaling \$348, 300, 000, to be repaid as and when India can pay either in rupees or goods.

Loans in the Technical Cooperation Program, \$156, 100, 000, are from proceeds of agricultural commodities supplied under Public Law 480. This means that 81 percent of U. S. loans to India are repayable in rupees.

This program is organized differently from other programs in this area. India was one of the few countries of South and Southeast Asia starting a planning device for her economic development shortly after she received her independence. The Development Board or the Planning Commission, as one might call it, has just recently completed and projected to the country its third five-year plan. This third plan is under debate in the Parliament as this is written. This planning commission is a genuine, centralized, over-all planning body which

seeks to take the resources that India has, plus the resources and assistance offered India by other nations, and fit it all into a national development program. The U. S. mission here and its various technical staffs is called the Technical Cooperation Mission, not USOM or any of the other fancy names applied to our aid programs in other countries. The planning board and ministries seek advice for those programs on which it appears that the United States might be most helpful. If this fits into the Indian plan, the programs are launched as a part of the total picture. This also means that our various divisions of the Technical Cooperation Mission here have rather distinct but somewhat distant relationships with the various ministries in the Indian government. This is not the so-called counterpart or opposite-number type of relationship which sometimes prevails in other countries. All aid of every kind passes in review before the Development board and also must be approved by the finance ministry, which scrutinizes the assistance or the part which India is to pay in a general program. Some technicians are housed with their technical counterparts in the ministries; others are not.

This general setup presupposes a different kind of administrative setup for the TCM mission. It always has been relatively small and has always played more of a facilitating and advisory role than the operating role characterized by missions in some other countries. At the present time a somewhat new kind of country setup is being tried out under the American embassy. It provides that the counselor or

minister of economic affairs of the United States embassy, now Mr. Tyler B. Wood, be the director of TCM and sit about one-half of his time at his economic affairs desk at the embassy and about one-half of his time at the TCM desk over in the TCM building, which is in another part of town. There is normally under Mr. Wood a strong deputy who is always at the TCM office, and, in effect, coordinates and runs the American staff in the TCM. This particular type of setup seems to be operating relatively well under the Indian conditions, and probably the personality and the particular way that Mr. Wood operates has something to do with the success of the operation.

Under the original TCA setup, the director of the Technical Cooperation Mission worked closely with the Indian Planning and Development Board. He was in frequent formal and informal contact with its members at all times and most all technical assistance programs in which the U.S. participated were first discussed, reviewed, and approved by the planning board in the close consultation with the TCA mission director. Since about 1955, when the old TCA director left India, the U.S. staff and TCM mission became more formalized and centralized. The agricultural and public health technicians, many formerly in the states, were brought into New Delhi. The relations of the technicians with the technical ministries became more formal and, in the words of an Indian member of the planning board, the TCM mission became an agency with which the "Planning Board had to negotiate--rather than work with and plan with on mutual programs."

This brought about some strained relationships between some of the TCA staff and the planning board.

The present director, Mr. Tyler Wood, has been on the job over 18 months at the time this is written. It appears Mr. Wood is moving the mission back toward the original working arrangement. Gradually there is developing a closer relationship between the TCM mission as a whole and the various Indian ministries. There is now collaboration on various kinds of projects and more joint looking at and joint planning of the role which the American technicians and others may play in the total picture.

The program content, while it follows the general over-all technical assistance lines found in most every other country, is hardly what one would call an over-all program so far as the Americans are concerned. We are simply a part of the Indian program, and whatever programs are largely sponsored and supported by the Americans are merely parts of the total Indian program. Thus the United States may have a piece of the over-all agricultural plan.

For instance, we have specific programs in the development of a national extension service for India. We have a program dealing with grain storage. We initiated, with the Indians, the first and the principal tube-well program ever undertaken on a large scale on this subcontinent. This tube-well program will be made a part of a special project report. We are also taking a piece of the over-all agricultural education program in this country. We are taking a piece of the

community development program and a piece also of the newly announced and newly planned series of area demonstrations on rapid food production, which is being largely engineered by the Ford Foundation but supported heavily by India and supported in small sectors by the TCM mission here. In addition, we are the major drive with the Indians behind their fertilizer program and presently we have branched into some work with the National Institute of Cooperatives for developing credit and strengthening the various credit societies which have been in force in this country since 1904.

The U. S. industry staff is very lightly manned and plays chiefly an advisory and a liaison role in the many gigantic development projects financed by India herself, the International Bank, or now by the American Development Loan Fund. The industry staff screens and passes on the general desirability of the loans and attempts whenever possible to suggest priorities, though the loan program is largely operated out of Washington and is usually a deal between the Indian ambassador-commissioner in Washington and the director of the Development Loan Fund.

There are attempts being made to provide for better local collaboration between the Development Loan Fund and the TCM mission. There is a move to have the loans coordinated and to some extent serviced by TCM to avoid the long stretch between India and Washington.

The net effect of the present operation is that the Technical Cooperation Mission here is sometimes left out of these loan programs

completely and they know little or nothing about them until something has been announced out of Washington.

Another feature of the U. S. mission here is that the educational division, which is rather small, makes the widest kind of use of the college contract system. Another feature is that five universities in the United States are coordinating and cooperating in a program designed to strengthen and reinforce agricultural education and to accelerate the adoption of improved agricultural practices. There is the closest kind of cooperation between the five colleges in the United States and the TCM mission. There are periodic visits by the five presidents of the five universities, who meet with Indian university presidents, study common problems and work out the best way to fit this vast machinery into the agricultural education program in this country. This technique of local contact and coordination of college contracts might alleviate some of the apprehension and misunderstandings on both sides in the college contract system.

U. S. Over-all Administration

Turning again to certain administrative aspects of the Indian program, there is now a definite effort being made to get the major decisions that are made from time to time about program direction and changes which might take place in the program transferred from Washington to the mission on the grounds that the people here should know and probably do know better what the situation is and how to

approach a particular Indian situation than people who sit behind the desks in Washington.

The present technical assistance program--that is, for fiscal 1960--totals only \$8,953,000. Of this amount, some \$2,226,000 is set aside for agriculture; industry and mining will receive \$1,758,000; and education; \$1,896,000, with public administration, health and sanitation, transportation taking their respective places along the line.

There is being projected for fiscal 1961 a program of about \$9,141,000, with about the same ratio or breakdown as FY 60. The exception will be agriculture which, taking note of the drive to improve the agricultural production in the third year plan, is projected at \$3,081,000 in strictly technical assistance funds for the agricultural program. The other funds remain about the same. For 1962, the projection is for \$10,407,000; agriculture will decline some and industry and mining will come up along with health, sanitation and education. The sums devoted to pure technical assistance are small compared to the vast sums being spent in the broader field of economic development. However, the impact of these smaller programs on people is considerable.

There are many other donors and agencies working in India on many fronts, from steel mills to village well programs. They are, however, coordinated by the planning board as a part of the whole. Incidentally, Germany has recently announced a substantial sum of money to be devoted to technical assistance work in India. There was

in India in August, 1960, the forerunner of the German mission which will sit down with the Indian government and determine the kind of projects and programs which would be best suited from the Indian standpoint for Germany to undertake at the present time.

India is probably further along with the techniques of national planning and has more experienced and able administrators than any of the countries in Asia, with the possible exception of Taiwan, and that would be on a relative basis. The rigidities of the Indian planning system and the overcentralization in New Delhi account for some of the delays inherent in so vast a program in so vast a country. The Indian government, however, is looking at its overcentralization of development programs and planning of them, and there are evidences, especially in Community Development and Agriculture, that program implementation and direction will be taken more closely to the people with more of the responsibility falling on state governments and even local village or district groups. It is most evident that local people will have to become more directly involved in planning and execution of many of the Indian schemes if they are to succeed.

The Public Health Program

The public health program in India follows very closely the pattern found in all of the other countries visited in the course of this study tour. It consists of one director, a representative or an official of the U. S. Public Health Service, seven division or technical helpers

stationed in New Delhi, and about 25 people stationed in various districts over India. This is a fully developed over-all program in which the U. S. Public Health is an integral part; it is not merely a piece of an Indian program. There seems to be the same kind of cooperation between the Indian Ministry of Health, the WHO and the TCM mission as is found in other countries around the Middle East and Asia. There is a planned and definitely laid out technical assistance program in public health shared by the Indian government, the United Nations, several of the foundations and the U. S. TCM. There is a timetable on the development of nursing centers and health centers, and there are priorities on what will be attacked first in the general health sector. The United States' contribution to this total over-all program has been mainly some \$12.5 million worth of DDT. Some equipment and commodities have been supplied to various public health schools and other institutions. The American program is running largely to the service area--that is, striking out at the mosquito problem--while the WHO program is more in the area of advising the government on administration, techniques and, to some extent, health education work. Educational work is being sponsored by the Public Health Service through participants.

An example of how a public health program can be launched and become highly effective, at least statistically, may be seen from an analysis of the malaria program. The malaria program has the main priority, though midwife training, nurse's training, public health

centers and sanitation are major parts of the community development program which is bringing public health to the grass roots. In 1947, malaria struck and debilitated over a million people in India. One million people died annually between 1947 and 1951 from malaria alone. Last year malaria was reduced to exactly one million cases in all India and only 10,000 deaths resulted from the disease. This is a measure of the effectiveness of this particular program in this country.

Agricultural Program

As mentioned previously, India has planned greater emphasis on agriculture during the third five-year plan. The TCM agricultural programs have varied from a small research development and agricultural engineering training effort started in early 1952 to major efforts such as community development, now largely an Indian government and a Ford Foundation show; vast fertilizer demonstration programs, to be discussed in a special report; the establishment of an agricultural extension service; the introduction of hybrid corn; some work on livestock, and the beginning of a soil and water management program.

The tube-well program, which started as an agricultural idea, was largely implemented on the Indian side, as well as the TCM side, by the planning board and the respective state water authority organizations through contracts with private drillers and well developers. The agricultural follow-up on the tube-well program will be involved

in the soil and water management effort if and when this gets to major project or program status.

The Hybrid Corn Development

India has for many years experimented and carried out research on hybrid corn and its adaptation to the Indian agricultural system and climatic conditions. The TCM mission undertook early in 1954 the introduction of American hybrid corn into India as well as assistance in further development of Indian hybrids.

American technicians were not able to get either the production results or the acceptance of American hybrids by Indian farmers on a scale which has been experienced in other countries. There always has been reluctance on the part of the small Indian farmers to purchase the hybrid seed, even though theoretically it would be more economical in the long run than using his own poor seed. Indian researchers and technicians were reluctant to accept an outside hybrid seed for mass introduction to India even though there was some evidence that hybrids from the U. S. , Italy, and some of the South American countries would give good results.

The types of corn which are popular and the best producers in the United States are not popular with the Indian corn-eating public. The availability of hybrid seed, of course, is very low, and the efforts to find the proper kinds of hybrids to reproduce in India and to produce India's own corn were not too successful. The hybrid idea has spread, however, and a very large number of cultivators have tested out hybrids

with reasonably good success. They always have been reluctant to repeat the experiment unless someone gave them the seed corn. They were unwilling to buy the new seed at the cost and risk the effort. Starting in about 1954, the Rockefeller Foundation, in its usual effective and efficient way, began studies and cross-hybridization of various types of Indian corn in an effort to develop a true Indian hybrid. Though it has taken six years, this has been highly successful. They have concentrated on two or three strains and there has now been developed in India, primarily through Rockefeller Foundation sponsored research, some high-producing hybrid seed which may be reproduced on Indian plots and possibly introduced on a broader scale.

This seems to be the status of the hybrid corn or maize program in India at this time. U.S. technicians are continuing to work on the problem with the Indians and, with these new corns developed primarily by Rockefeller, concentration will be behind one or two good producers which are acceptable to the Indian corn-eating public.

Agricultural Extension

The establishment of an extension service, patterned somewhat after the U. S. , has been a part of the general agricultural development program of India from the very beginning. Major emphasis in this program in the early part was the establishment of a sort of agricultural advisory service in each state with only general direction and supervision from the national government. Training Indian agricultural advisors in the United States, plus a rather long parade of technicians



from the United States, has been the major effort in this program. As yet, it appears the extension service is not fixed in either the public mind or in the machinery of the national government as a permanent institution which directly affects the individual producers.

Further, extension has not been institutionalized to the extent that it is in some other countries, and it does not appear to reach much further down than the district or village block level.

The actual contact with the producer comes, if at all, through the Community Development Program in a scheme whereby the extension worker is called into the village block to help the village level Community Development workers who are generalists in agriculture, public health, education, and a host of other required activities. It is the considered opinion of the U. S. technical assistance people, as well as some technicians on the Indian side, that a strong agricultural extension staff at the state and district levels will have to be developed to give proper technical backstopping for the village level general workers. This will require a large American staff and a doubled or trebled staff on the Indian side with much more emphasis on a specialist staff to continually feed the extension staff with new research and demonstration data.

If such a massive or task force effort were undertaken, an estimated 400 American extension technicians and about three times that number added Indian personnel would be needed--plus a major backstopping effort to funnel the research from the many research stations and demonstration areas in the country to the extension service.

Community Development

While the Community Development program originated as an agricultural production program using the Community Development process to involve Indian village people in their own problems, it soon took on many other priorities, which to some extent shifted the major effort away from agricultural production after its launching on a national scale in 1952.

The third five-year plan is again turning to agriculture as a major effort through the Community Development program. Two-thirds of the time of the village workers, under the plan, is to be devoted to agricultural development and production. The director of the over-all Community Development program at the national level has cabinet status and this program has been one of the most extensive efforts by any country in the world to reach the masses of people at the village level. Regardless of its apparent failure to stimulate in a major way food production, it has been a vast education in self-help and democracy, which is more than worth the total effort put into it. Since the program has been understudied by ICA and other agencies, these reports will not deal with further details of it.

Industrial Development

The industrial resource development and public works programs in India are so vast that they could hardly be mentioned in a brief and general review like this. Suffice to say American participation in this



industrial effort has been in the form of assistance at the planning stage by the early TCM mission, rather large grants and loans for the dollar costs of some of the major programs, with American technicians mainly hired directly by the Indian government.

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